

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1 through 18. (Canceled)

19. (New) A mechanical joint consisting of:

a first shaft having an axial end and an annular groove spaced apart from the axial end, the annular groove having a first sidewall and a second sidewall that is spaced axially apart from the first sidewall;

a second shaft;

a housing having an aperture formed therein, the first shaft extending through the aperture and being rotatably supported by the housing;

a set of splines coupled to one of the first and second shafts;

a mating set of splines coupled to the other one of the first and second shafts, the mating set of splines being matingly engaged with the set of splines such that the first and second shafts are slidably but non-rotatably connected;

a boot seal having a coupling end, a body portion, and a flange end, the coupling end being disposed about the second shaft and including a U-shaped annular clamp flange, the coupling end being coupled to a first axial end of the body portion, the body portion including a plurality of convolutions, the flange end being coupled to a second, opposite end of the body portion and including a flange seal and an annular lip, the flange seal being received into the annular groove and abutting the first sidewall to

thereby axially retain the flange seal to the first shaft in an axial direction, the flange seal constricting about the first shaft solely through resilient clampless constriction to thereby sealingly engage the first shaft, the annular lip having a first portion that extends generally radially outwardly of the flange seal and a second portion that is coupled to a distal end of the first portion and which extends circumferentially about the first shaft radially outwardly of the aperture in the housing, the second portion terminating at a location that is axially spaced apart from the housing; and

a single boot clamp received in the U-shaped annular clamp flange and non-rotatably coupling the coupling end to the second shaft.

20. (New) The mechanical joint of Claim 19, wherein a chamfer is formed on a leading edge of the flange seal.

21. (New) The mechanical joint of Claim 20, wherein the annular lip is generally L-shaped.

22. (New) The mechanical joint of Claim 21, wherein a plurality of ribs are coupled to the annular lip whereby the ribs stiffen the annular lip.

23. (New) The mechanical joint of Claim 22, wherein the ribs are coupled to the body portion, the flange portion or both the body portion and the flange portion.

24. (New) A method comprising:

providing a first shaft having an axial end and an annular groove spaced apart from the axial end, the annular groove having a first sidewall and a second sidewall that is spaced axially apart from the first sidewall, the first shaft including a set of splines;

providing a housing having an aperture formed therein;

rotatably supporting the first shaft in the housing such that a portion of the first shaft extends through the aperture;

providing a second shaft with a mating set of splines;

providing a boot seal having a coupling end, a body portion, and a flange end, the coupling end being disposed about the second shaft and including a U-shaped annular clamp flange, the body portion including a plurality of convolutions, the flange end being coupled to a second, opposite end of the body portion and including a flange seal and an annular lip, the annular lip having a first portion that extends generally radially outwardly of the flange seal and a second portion that is coupled to a distal end of the first portion;

assembling the boot seal to the second shaft such that the coupling end is coupled to a first axial end of the body portion;

engaging the splines and the mating splines to one another to slidably but non-rotatably couple the first and second shafts to one another;

assembling the boot seal to the first shaft such that the flange seal is received into the annular groove and abuts the first sidewall to thereby retain the flange seal to the first shaft in an axial direction, the flange seal constricting about the first shaft solely through resilient clampless constriction to thereby sealingly engage the first shaft, the

second portion of the annular lip extending circumferentially about the first shaft radially outwardly of the aperture in the housing and terminating at a location that is axially spaced apart from the housing.

25. (New) A mechanical joint consisting of:

a first shaft having an axial end and an annular groove spaced apart from the axial end, the annular groove having a first sidewall and a second sidewall that is spaced axially apart from the first sidewall;

a second shaft;

a housing having an aperture formed therein, the first shaft extending through the aperture and being rotatably supported by the housing;

a set of splines coupled to one of the first and second shafts;

a mating set of splines coupled to the other one of the first and second shafts, the mating set of splines being matingly engaged with the set of splines such that the first and second shafts are slidably but non-rotatably connected;

a boot seal having a coupling end, a body portion, and a flange end, the coupling end being disposed about the second shaft and including a U-shaped annular clamp flange, the coupling end being coupled to a first axial end of the body portion, the body portion including a plurality of convolutions, a plurality of radially extending ribs being coupled to the body portion and the coupling end, the flange end being coupled to a second, opposite end of the body portion and including a flange seal and an annular lip, the flange seal being received into the annular groove and abutting the first sidewall to thereby axially retain the flange seal to the first shaft in an axial direction, the flange seal

constricting about the first shaft solely through resilient clampless constriction to thereby sealingly engage the first shaft, the annular lip having a first portion that extends generally radially outwardly of the flange seal and a second portion that is coupled to a distal end of the first portion and which extends circumferentially about the first shaft radially outwardly of the aperture in the housing, the second portion terminating at a location that is axially spaced apart from the housing; and

a single boot clamp received in the U-shaped annular clamp flange and non-rotatably coupling the coupling end to the second shaft;

wherein a chamfer is formed on a leading edge of the flange seal;

wherein the annular lip is generally L-shaped; and

wherein a plurality of ribs are coupled to the annular lip whereby the ribs stiffen the annular lip, the ribs being coupled to the body portion, the flange portion or both the body portion and the flange portion.